

**PREPARED STATEMENT OF**

**WAL-MART STORES, INC. ON**

**“THE ROLE OF STANDARDS IN THE GROWTH OF GLOBAL  
ELECTRONIC COMMERCE”**

**Before the**

**SUBCOMMITTEE ON SCIENCE, TECHNOLOGY AND SPACE**

**Of the**

**COMMITTEE ON COMMERCE, SCIENCE, AND  
TRANSPORTATION**

**UNITED STATES SENATE**

**Washington, D.C.**

**October 28, 1999**

Mr. Chairman and members of the Subcommittee, I am Glenn Habern, Senior Vice President for New Business Development at Wal-Mart Stores, Inc. I appreciate this opportunity to present Wal-Mart's views on Internet standards for e-commerce and compatibility in enabling the growth of global electronic commerce.

Wal-Mart was built on two simple principles: to provide customers the best available value and the best service in the industry. What has set Wal-Mart apart, however, is its ability to deliver on these promises every day. Wal-Mart is about commerce, not just e-commerce. We are focused on delivering the products that our customers want in the manner that they want to shop. Wal-Mart.com operations mirror our brick and mortar stores systems, operational standards and customer service.

In 2000, Wal-Mart.com will bring Internet access to the more than 90 million customers that currently shop our stores weekly. Through the implementation of an in-store kiosk system, customers that may not have Internet access at home can shop Wal-Mart.com via the kiosk in our store locations. We are focused on delivering the products that our customers want in the manner that they want to shop. Technology is becoming available to everyone. The free market is working and we expect prices will continue to fall with both innovation and competition increasing. As a result, the consumer is the winner.

We do not believe that regulations are needed in the e-commerce space to enable its growth. Allowing space for innovation has propelled the technology field within the last five years. The evolution of technology is still in its infancy, and to place an overriding structure on it at its current stage would freeze progress.

In the following pages, I will describe at length Wal-Mart's approach to e-commerce. However, let me pause to make one observation. Wal-Mart's e-commerce program has evolved over a number of years. If several years ago a standard setting body or a government agency had sat down and tried to define e-commerce standards or structures, no person, no matter how enlightened could have hoped to envision the future and develop protocols to serve all the needs that have emerged.

We believe that this period of dynamic growth is just beginning, and some conditions will hold true in the future, namely that no standard setting body could hope to replicate the innovations that will be introduced according to the demands of commerce itself.

Accordingly, we recommend that government should not try to force standards on industry artificially but should continue to permit the market to determine what standards should evolve and at what pace.

Providing the ultimate in value means keeping costs low, making the supply chain as efficient as possible and ensuring that the right products, offered in the right packages, are available when and where customers want and need them. To maintain the highest levels

of service, Wal-Mart must ensure that proper levels of inventory are maintained; that associates are available to assist customers; that pricing is always up to date; and that customers can quickly find what they need and move through the check-out area.

One of the key reasons that Wal-Mart continues to lead the retail industry is the company's commitment to applying the latest networking, information technology and Internet technology to improve operations. By using innovative high-tech solutions to address each of the needs outlined above, Wal-Mart has:

- Streamlined its supply chain. Supplier relationships have been largely automated. Computers in-store and at Wal-Mart headquarters keep track of inventory as it is sold, and purchase orders are sent to vendors automatically to ensure each store is capable of meeting customer demand. And vendors can access sales information and forecasts for the products they provide, allowing them to adjust manufacturing levels in sync with Wal-Mart sales. These automated, online systems help Wal-Mart keep its overhead low, which translates to lower prices for customers.
- Improved in-store operations. Wal-Mart's in-store computers are connected to corporate headquarters through a powerful frame relay network, allowing near real-time tracking of inventory, prices and purchase orders on a store-by-store basis.

Retail Link enables Wal-Mart to deliver Every Day Low Prices and the best customer service in the industry.

### **Retail Link**

Wal-Mart works with more than 7,600 suppliers that manufacture the range of products offered in its stores. To coordinate this massive supply chain, Wal-Mart takes advantage of the latest Internet and wireless communications technology to provide a constant link between its suppliers, its fleet and its stores.

One of the cornerstones of Wal-Mart's philosophy is making sure that the products customers need are on the shelves whenever customers need them. With the vast array of products available at Wal-Mart and the fluctuating nature of customer demand, this is also one of Wal-Mart's biggest challenges.

To meet customers' needs, Wal-Mart's suppliers often must be as flexible and fleet-footed as Wal-Mart itself. To help suppliers meet the challenge, Wal-Mart established Retail Link, an Internet-based resource that provides suppliers with a full range of information on their business with Wal-Mart, updated on a daily basis.

Through Retail Link, suppliers can:

- Download purchase orders from Wal-Mart.
- Check the status of their invoices to Wal-Mart.
- Determine how many of their products were sold at Wal-Mart stores the previous day.

- Examine the effects of markdowns or returns on their inventory.
- Access reports on sales over a period of up to two years, as well as sales forecasts for their products for up to one year.
- Upload reports and updates for Wal-Mart.

Invoices, purchase orders and other documentation is processed through a system called Electronic Data Interchange. Suppliers use standardized formats for a variety of forms, and can search for and access specific information from the database at any time. The system is used by about 5,000 suppliers to process purchase orders from Wal-Mart, and about 2,600 suppliers use the system to send invoices to Wal-Mart. This accounts for about 93 percent of purchase orders and 85 percent of invoices processed by Wal-Mart.

The constantly updated flow of information through the Retail Link and Electronic Data Interchange systems allows Wal-Mart and its vendors to work together seamlessly to ensure that inventories match consumer demand. It also allows suppliers to more efficiently serve Wal-Mart, meaning lower costs and better prices for customers.

Retail Link™ is now the industry leader for collaboration via the worldwide web. Suppliers access and share data over the Internet and work hand-in-hand with Wal-Mart buyers to better serve their mutual customer, the consumer. Retail Link was first implemented in 1991 as a limited-capacity, closed-network system for suppliers. Initially the system required dedicated hardware, which Wal-Mart provided to suppliers. In 1997, the system was transferred to the Internet, allowing fast, secure access through nearly any personal computer. The system now processes an average of 120,000 supplier queries each week.

Wal-Mart maintains the Retail Link system, trains vendors on its use and maintains a technical support team to assist suppliers. The Retail Link system is composed of Windows NT-based servers, which handle client requests, and UNIX-based servers that handle applications processing. Many information queries from suppliers are processed through Wal-Mart's massive NCR teradata data warehouse, which stores 100 terabytes of information on all aspects of the company's operations.

We recently announced a major expansion of our data warehouse designed to expand the level of cooperation with our merchandise suppliers. This expansion allows for significant growth in the amount of sales history available for analysis. In the past, suppliers were able to analyze up to five quarters of sales history. With this expansion, they now have up to two years of data to examine, enhancing their ability to spot and react to long term trends.

*(“We have high expectations for our suppliers, and we provide a great amount in terms of business systems capability,” says Randy Mott, Wal-Mart Sr. Vice President and CIO. “Retail Link™ gives Wal-Mart buyers and suppliers the information they need to treat each store as if it were the only one in the chain.”)*

Wal-Mart's data warehouse, which is two times greater than the next largest Fortune 500

data warehouse, was expanded to 101 terabytes from 44 terabytes. Previous day's information, through midnight, on over 10 million customer transactions is available for every store in every country before 4 a.m. the following day. Today, over 7,000 suppliers access Retail Link and get answers to any question at any time. Wal-Mart currently averages 120,000 of these complex trend analysis questions each week.

*("It's really all about service to our customers", says Tom Coughlin, President and CEO of the Wal-Mart Stores Division. "Our investment in this technology helps our supplier partners and Wal-Mart buyers provide customers with what they want: the right product in the right store at the right price.")*

These databases allow Wal-Mart to quickly and effectively predict the needs of customers in different areas and from different backgrounds. And by ensuring that each store receives products that closely match its customers' needs, Wal-Mart keeps inventory costs down.

### **Privacy, Trend Analysis and Consumer Preference**

As customers needs evolve and change, so will buying patterns. The successful retailers are the ones that adjust their business in sync with these transitions.

Wal-Mart uses its frame relay data network and the most expansive, powerful teradata storage facility in the industry to keep its finger on the pulse of customers' buying patterns. Every transaction every day at every Wal-Mart store is cataloged and examined to find ways to improve the product mix and customer service. While the system is used to determine a full range of customers' preferences and buying patterns, it is important to note that it is our corporate policy that no information on individual customers is shared. Wal-Mart is committed to making every effort to better serve its customers, but it also respects customers' privacy.

Wal-Mart's website, Wal-Mart.com does not share personal data with anyone outside the company.

Following are just a few examples of how this information is used:

- Forecasts are used to help ensure that inventory levels match customers' purchasing habits at different stores and different times of year.
- Purchasing patterns are used to determine item affinity, or the relationships between purchases of multiple items. For example, if Wal-Mart sees a pattern where many customers purchase toothpaste and aspirin during the same trip, the items will be placed closer to each other in Wal-Mart stores, making it easier for customers to find what they're looking for.
- Wal-Mart provides feedback to suppliers on how customers are purchasing their products. For instance, if many customers were purchasing three of the same item, Wal-Mart might suggest that the supplier provide the item in packages of three.

Information from the teradata system also is provided to suppliers through the Retail Link program.

- By comparing sales data for the like items at varying price points, Wal-Mart can determine whether increased sales would allow the company to sell an item for a lower price without affecting the bottom line.

Information for Wal-Mart's trend analysis efforts is gathered automatically at each Wal-Mart store. Point-of-sale registers record each item sold at every Wal-Mart store. This information is collected by servers located in the stores' back offices, and transmitted to the teradata facility at Wal-Mart's headquarters via high-speed frame relay data connections. Information on a given day's transactions is processed by the teradata system overnight and is available for analysis the following morning.

The teradata storage facility holds 101 terabytes of information, or 101 trillion bytes of information. This is enough storage to maintain every Wal-Mart transaction record for a two-year period. The system processes an average of 120,000 complex information requests per week from Wal-Mart associates and suppliers.

Trend analysis and consumer preference efforts were launched in 1991, when a sales tracking system was implemented. Additional features were added through the years to create today's industry-leading system, and Wal-Mart will continue to develop new applications for the system.

### **Global Commerce Initiative**

The standards important to retailers and suppliers can exist upon a number of technologies and platforms. Standards needed in the retail industry are commerce-based not technology based. For example, we interact with suppliers that are UNIX based and PC based as well as those who operate on an IBM mainframe.

Already, various organizations are improving retailer supplier relationships. Since 1986, VICS, the Voluntary Interindustry Commerce Standards Association, has worked to improve the efficiency of the entire supply chain. VICS establishes cross-industry standards that simplify the flow of product and information in the general merchandise retail industry for retailers and suppliers alike.

One of VICS current focuses is Direct to Consumer commerce (DTC). This evolved from the interaction and development of trends both surrounding and within the retail environment. These trends involve the retailers and manufacturers interested in DTC, the consumers driving the need for it, and the technology that has facilitated the development and growth of this movement. Optimizing the shopping experience has never been more important. Direct to Consumer Commerce gives the retailer and manufacturer the opportunity to offer the consumer a vast number of products in a small amount of real estate, with consumer prompting as opposed to mandatory interaction with sales associates. As consumer acceptance of this alternative grows, new relationships between

consumers, retailers, and manufacturers will form. As retailers and manufacturers explore this form of Direct to Consumer commerce, the need to standardize the information flow between the interested parties will occur. The Voluntary Interindustry Commerce Standards Association's (VICS) Direct to Consumer committee was formed to address this issue. The retail industry will continue to experiment and move forward adopting standards as they are created and approved.

Recently Wal-Mart joined a group of the world's leading companies representing more than 800,000 large and small companies to create the first organization dedicated to simplifying worldwide commerce for the consumer goods industry. The newly formed board identified five initial activities to streamline relationships between manufacturers and retailers to better meet the needs and expectations of consumers across the world.

This board is concentrating on key technologies and processes that enable consumer goods to move more efficiently across the global supply chain. Those include electronic data interchange, product numbering and identification, standardized product tagging, global scorecard development and unleashing the power of the Internet through Industry Extranets.

The Global Commerce Initiative is the result of joint industry efforts in North and South America, Europe and Asia that since the early-nineties have been building strategic collaborations between stakeholders large and small across the complex supply chain for modern consumer goods. They include the Efficient Consumer Response (ECR) movements in Europe, North and South America and Asia, together with the Voluntary Interindustry Commerce Standards Association (VICS) in North America, EAN International and UCC, CIES—The Food Business Forum, FMI, AIM and GMA.

The board seeks to smooth out international variations in supply chain standards. While much progress has been made locally within the Americas, Europe and parts of Asia, there remain substantial process barriers between continents. Simplifying international commerce practices has become an immediate and pressing priority. Despite technological advances, business processes, systems and standards that will enable optimization of the supply chain across continental boundaries have not been developed. These are needed to deliver better consumer value.

Again, standards needed in the retail industry are commerce-based not technology based.

### **Supplier Development**

Wal-Mart is committed to purchasing products from local and regional vendors and suppliers through its Vendor Development Department. During the fiscal year ending January 31, 1999, Wal-Mart spent \$67 billion with some 96,000 U.S. suppliers. Wal-Mart has a variety of vendor development programs, including:

## **MINORITY & WOMEN-OWNED BUSINESS DEVELOPMENT PROGRAM**

Wal-Mart believes that cultural diversity translates into customer satisfaction. We are always looking for ways to better reflect the communities in which we operate and the broad marketplace we serve. The Minority & Women-Owned Business Development Program coordinates services that encourage and support businesses owned by minorities and women.

The program offers minority and women-owned businesses:

- The opportunity to become Wal-Mart vendors and tap into the company's huge retail potential.
- The opportunity to provide services and non-resale products to Wal-Mart Stores, Inc.
- Start-up support through the Wal-Mart Innovation Network (WIN), designed to nurture innovative products in development and those that have sales histories of less than six months.

## **WIN: WAL-MART INNOVATION NETWORK**

The Wal-Mart Innovation Network encourages new products and ideas. It offers inexperienced inventors and entrepreneurs the advice of professionals to determine the commercial potential of products that are still in development stage or have a sales history of less than six months. The process also helps identify the risks involved with bringing the product to market.

The program offers referrals to government or university economic development organizations that may assist with further development, production or marketing of new products.